

Technical Branch
Science & Engineering Group
Para-Professional Engineering Series

ENGINEERING TECHNICIAN I

04/98 (TLW)

Summary

Under general supervision, perform a variety of semi-routine engineering support and administrative activities.

Typical Duties

Draft engineering drawing, maps, profiles, utility lines, or street layout using manual and Computer Aided Design Drafting (CADD) methods. Involves: creating engineering drawings from sketches, rough drawings, raw data, diagrams and verbal or written narrative instructions; modifying existing plans or drawings to reflect changes to plans or existing conditions; developing routine specifications for materials, and construction and equipment plans.

Act as rod and chain handler in survey crew. Involves: setting points, reading, verifying and recording data; measuring and recording distances, elevations, grades, horizontal angles; field checking plans against actual utility lines, street construction, water and sewer lines, drainage lines and flow; notifying supervisor or engineer of conflicts or discrepancies and suggest corrective action or plan change as qualified if requested.

Gather field data for a variety of engineering uses in planning, traffic flows, water and sewer installation, special investigation of complaints on plan modification. Involves: counting, measuring, recording of numeric and descriptive details; reading and analyzing plan documents and drawings, comparing actual conditions to plans, and recommending changes as requested; collecting and converting raw data into tables and graphs to assist in plan development, or for traffic control signal and signage installation and modification.

Perform related duties as assigned. Involves: performing any duties of coworkers, if required, during temporary absences sufficient to maintain continuity of normal operations; maintaining records and files; providing routine information to individuals both within and outside of the unit; preparing and verifying of work-order documents.

Minimum Qualifications

Training and Experience: Graduation from High School or equivalent supplemented by courses in mathematics and drafting and two (2) years para-professional engineering experience; or an equivalent combination of training and experience.

Knowledge, Abilities and Skills: Good knowledge of: basic mathematics related to engineering such as geometry, algebra and trigonometry. Some knowledge of: manual and computer-aided design drafting (CADD) techniques; principles and techniques of engineering design and field surveying.

Ability to: read plans and blueprints; manually or with the aid of computer equipment draft engineering documents and perform related mathematical calculations; create graphic and tabular displays; set up and maintain files and record systems; establish and maintain effective working relationships with fellow employees and the general public.

Skill in the safe operation and care of: personal computer or network work station, including CADD, word processing, spreadsheets and database software; standard drafting instruments; time and distance measuring devices; motor vehicle through city traffic.

Physical Requirements: Frequent: close visual concentration to draft design drawings; exposure to adverse weather conditions; walking, standing and climbing on rough terrain and construction sites. Occasional: stooping, bending, lifting and carrying objects and equipment (up to 30 lbs).

Special Requirements: Subject to call back, and working flexible hours, weekends, holidays and mandatory overtime, as required.

Licenses and Certificates: Texas Class "C" Driver's License or equivalent from another State.

Director of Personnel

Department Head